




ICF International / Laboratory Data Consultants

Environmental Services Assistance Team, Region 9
1337 South 46th Street, Building 201, Richmond, CA 94804-4698
Phone: (510) 412-2300; Fax: (510) 412-2304.

MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Manager (TOM) &
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager 
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
Technical Direction Form No.: 00105041 Amendment 3

DATE: March 16, 2007

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC LA02
CERCLIS ID No.:	CAD042245001
Case No.:	Not Provided
SDG No.:	06-1647
Laboratory:	Applied Physics & Chemistry Laboratory (APCL)
Analysis:	1,2,3-Trichloropropane (1,2,3-TCP) and n-Nitrosodimethylamine (NDMA)
Samples:	5 Water Samples (see Case Summary)
Collection Date:	March 6, 2006
Reviewer:	Nanny Estrada, ESAT/Laboratory Data Consultants (LDC)

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

SAMPLING ISSUES: ☒ Yes ☐ No

Data Validation Report – Tier 3

Case No.: Not Provided
SDG No.: 06-1647
Site: Omega Chem OU2
Laboratory: APCL
Reviewer: Nanny Estrada, ESAT/LDC
Date: March 16, 2007

I. CASE SUMMARY

Sample Information

Samples: OC2-MW7-W-0-155, OC2-MW7-W-4-156, OC2-MW8C-W-0-157, OC2-MW8B-W-0-158, and OC2-MW8A-W-0-159

Concentration and Matrix: Low Concentration Water

Analysis: 1,2,3-TCP (GC) and NDMA (GC/MS/MS CI)

SOW: EPA Methods 504.1 and 1625 Modified

Collection Date: March 6, 2006

Sample Receipt Date: March 6, 2006

Extraction Date: March 9 and 10, 2006

Analysis Date: March 10 and 14, 2006

Field QC

Field Blanks (FB): Not Provided

Trip Blanks (TB): OC2-MW7-W-4-156 (for 1,2,3-TCP only)

Equipment Blanks (EB): Not Provided

Background Samples (BG): Not Provided

Field Duplicates (D1): Not Provided

Laboratory QC

Method Blanks & Associated Samples:

06G1343MB01: (1,2,3-TCP) All samples

06G1337MB01: (NDMA) All samples

Tables

1B: Data Qualifier Definitions for Organic Data Review

Sampling Issues

On the chain of custody (COC), the “relinquished” date of 2/6/06 is incorrect; the correct date is 3/6/06 (see attached COC).

Additional Comments

For the NDMA analysis, decafluorotriphenylphosphine (DFTPP) was not analyzed. Since NDMA is analyzed by the chemical ionization (CI) technique, no adverse effect is expected.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Volatile and Semivolatile Data Packages*;
- ESAT Region 9 Standard Operating Procedure 902, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Pesticide/PCB Data Packages*;
- EPA Method 504.1, *1,2-Dibromoethane (EDB), 1,2-Dibromo-3-chloro-propane (DBCP), and 1,2,3-Trichloropropane (123TCP) in Water by Microextraction and Gas Chromatography*, Revision 1.1, 1995;
- EPA Method 1625C, *Semivolatile Organic Compounds by Isotope dilution GC/MS*, June 1989; and
- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	<u>Parameter</u>	<u>Acceptable</u>	<u>Comment</u>
1.	Holding Time/Preservation	Yes	
2.	GC/MS and GC Performance	Yes	
3.	Initial Calibration	Yes	
4.	Continuing Calibration	Yes	
5.	Laboratory Blanks	Yes	
6.	Field Blanks	Yes	
7.	Surrogate (Method 504.1)	Yes	
8.	Labeled Compound (Method 1625)	No	C
9.	Matrix Spike/Matrix Spike Duplicates	N/A	
10.	Laboratory Control Samples/Duplicates	Yes	
11.	Internal Standard	Yes	
12.	Compound Identification	Yes	
13.	Compound Quantitation	No	A, B
14.	System Performance	Yes	
15.	Field Duplicate Sample Analysis	N/A	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. The following detected result is qualified as estimated and should be flagged "J".

- NDMA in sample OC2-MW8C-W-0-157 (below the practical quantitation limit)

Results below the practical quantitation limits (PQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

- B. The laboratory reported the NDMA sample practical quantitation limit (PQL) as 0.002 ug/L and reported a NDMA detected result of 0.0009 ug/L for sample OC2-MW8C-W-0-157. However, the signal to noise (S/N) ratio is only 3 and the area is only 393 for the concentration of 0.0009 ug/L (see attached quantitation report, p. 2020 in data package). Furthermore, the area for low standard of the initial calibration is only 1074 (see attached quantitation report, p. 2029 in data package). In the reviewer's professional judgment, the sample PQL should be raised to 0.02 ug/L; non-detected sample results should be reported as 0.02U.
- C. The laboratory did not spike the samples and method blanks with a labeled compound (i.e., surrogate; see Method 1625C Sections 6.8, 10.2.1.3, and 10.2.3.2 and Figure 4). Consequently, the extraction efficiency (surrogate recovery) cannot be evaluated. The NDMA-d6 spiked by the laboratory was used as an internal standard.

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," October 1999.

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: CHAM Hill Contact: Kerang Sun Tel #: 714-429-2000 Fax #: 714-429-2050
Address: 3 Hutton Centre Dr Suite 2000 City: Santa Ana State: CA Zip code: 92707

Bill to:						Analysis Items										Remarks			
Project Name/Code		Job #		P.O. #															
Project Address						APCL Quotation #													
Due Date: <input type="checkbox"/> regular <input type="checkbox"/> rush: ___ days ___ hours						Sampled by:													
Field Sample ID No.	Sample Description	Date	Time Collected	Sample Matrix	Preservation	# of Containers	Hexavalent Cr	1,2,3-TCP	NDMA										
	062-MW7-W-0-155	3/6/06	0932	water	varies	6	X	X	X										
	062-MW7-W-4-156	3/6/06	0932	water	HCL	1		X											
	062-MW8C-W-0-157	3/6/06	1144	water	varies	6	X	X	X										
	062-MW8B-W-0-158	3/6/06	1113	water	varies	6	X	X	X										
	062-MW8A-W-0-159	3/6/06	1415	water	varies	6	X	X	X										
See Page 164																			

QC Requirement: ☒ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA (E, C or D); ☐ Other (Please specify)

Sample Disposal: ☐ Return ☒ Disposal by APCL ☐ Hold for ___ days after receiving date. If not specified, samples will be discarded 45 days after samples are received.

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (___ °C).

Relinquished by W. Baye Date/Time 2/6/06 1457 Received by Rickel Shum Date/Time 3-06-06 1457

Relinquished by Rickel Shum Date/Time 3/6/06 1550 Received by W Date/Time 3/6/06 1550

APCL USE ONLY Service # _____ Note: _____

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Target Compound #2 from 1647-4 f=0.00111.sms

Sample ID:	1647-4 F=0.00111	Last Calibration:	2/21/2006 1:18 PM
Acquisition Date:	3/14/2006 2:52 PM	Calculation Date:	3/14/2006 3:21 PM
Method:	c:\... \ndma005.mth	Vial:	8
Volume:	3.0000	Multiplier:	1.000000
Data File:	c:\data\2006\06g1337\1647-4 f=0.00111.sms		

Compound Information

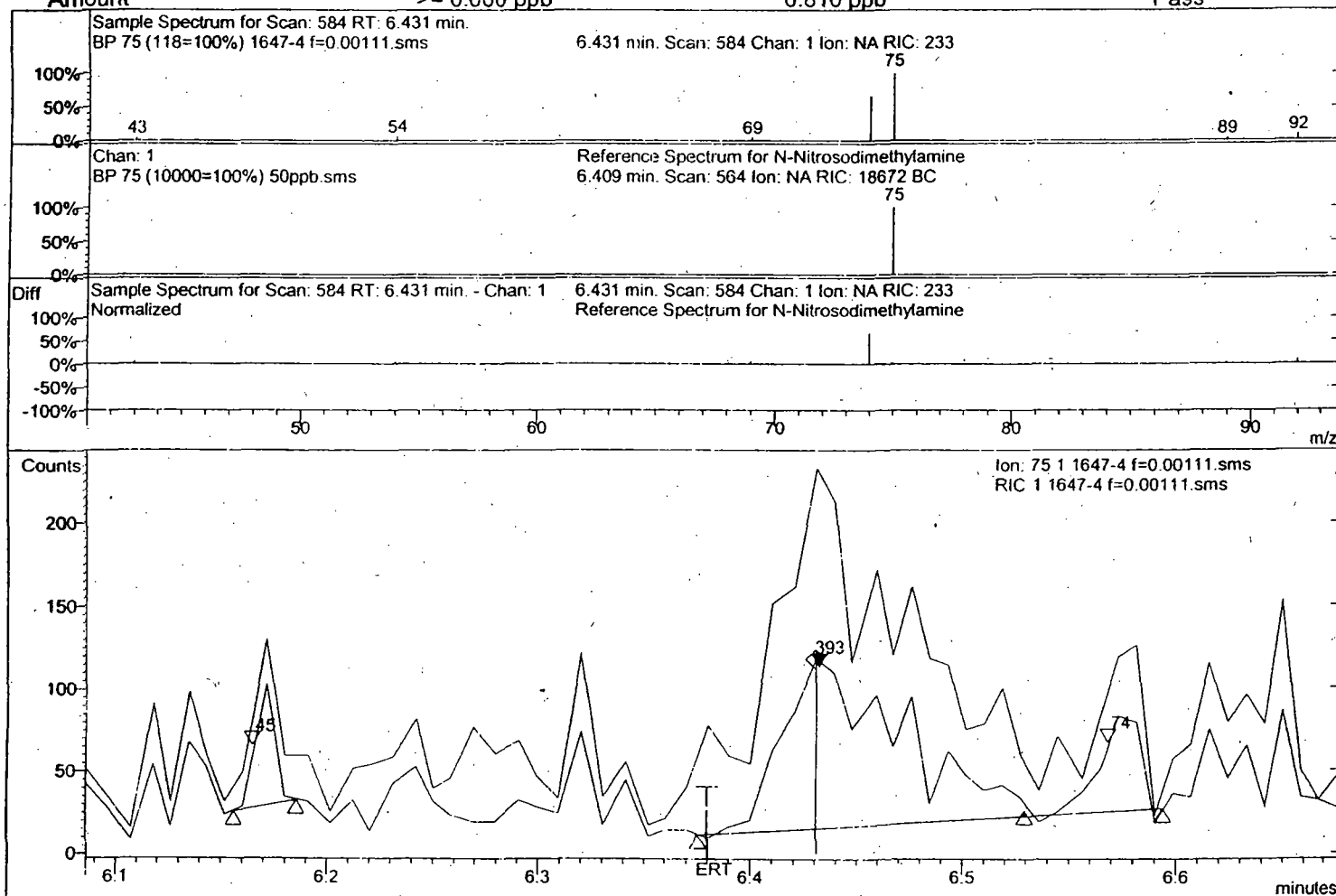
Peak Name:	N-Nitrosodimethylamine	CAS Number:	62-75-9	Identified
Result Index:	2	Compound Number:	2	

Identification

Parameter	Specification	Actual	Status
Search Type	Retention Time		
Retention Time	6.380 +/- 0.300	6.432 min.	Pass
Match Result		N/A	

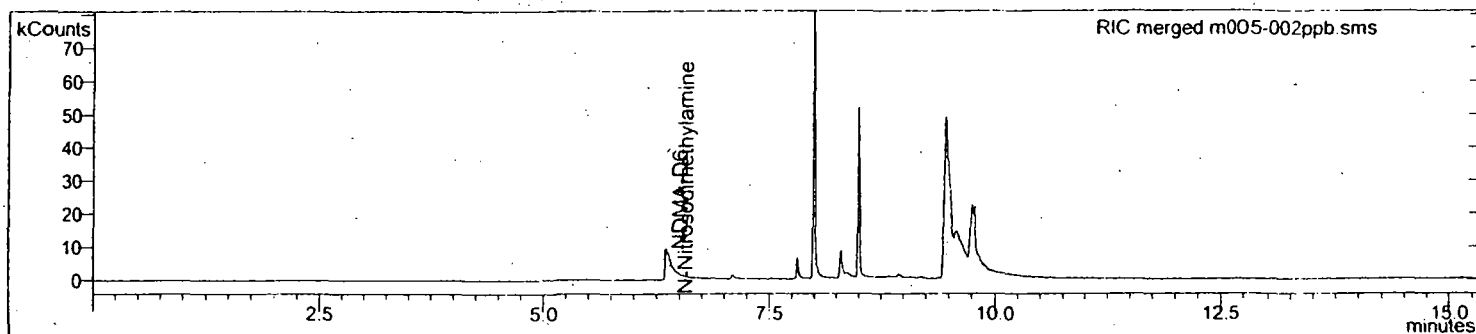
Integration and Quantitation

Parameter	Specification	Actual	Status
Quan Ions	75		
IS Peak Name	NDMA-D6		
Calibration Equation	Linear, Force, None	y = +0.7286x	
S/N Ratio		3	
Peak Detection	Normal		
Slope Sensitivity	20		
Peak Width	20.00 sec	4.3 sec	
Baseline Type	Normal		
Tangent Percent	10%		
Area	>=100	393	Pass
Height		98	
Amount	>= 0.000 ppb	0.810 ppb	Pass



NDMA BY GC/MS/MS ION TRAP Operator: James Feng

Sample ID:	M005-002PPB	Last Calibration:	2/21/2006 1:18 PM
Acquisition Date:	2/21/2006 10:20 AM	Calculation Date:	2/21/2006 1:18 PM
Method:	c:\... \ndma005.mth	Vial:	40
Volume:	3.0000	Multiplier:	1.000000
Data File:	c:\data\2006\06g1246\m005-002ppb.sms		

Target Compounds

#	RT	Compound Name	Res Type	Quan Ions	Area	Amount
1	6.363	NDMA-D6	Id.	81	50116	1.000 RRF
2	6.423	N-Nitrosodimethylamine	Id.	75	1074	0.536 RRF

Unidentified Peaks

None